Interior Architecture: the evolution of the discipline

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ABSTRACT
This paper chronicles the evolution of Interior Architecture through the lens of the Interior Architecture programme at Oxford Brookes University. Interior Architecture as a proper academic field originated from architecture but with a specific scope – to investigate and design the experiential/spatial conditions of buildings. This led it to be influenced significantly by other disciplines in regard to methodology, pedagogy, and even the subject matter of the programme. Whereas naturally it shares most of its critical framework with architecture and interior design, and draws upon similar theoretical contributions and practices, Interior Architecture incorporates findings and methodologies from other disciplines such as behavioural psychology, social studies, and research on perception. It has now consolidated into an independent academic field, able to offer significant insights on design strategies for people in the built environment, which can be applied meaningfully back into architecture studies.

Specifically, Interior Architecture at Oxford Brookes has placed the experience of space as the subject matter in the built environment through innovative design briefs, and academic publication. The design work and research produced by its students and staff is turning into a compressive methodology of design. This incorporates the idea that programmes of occupation are *a-priori* design strategies, conducted with an appreciation of variable spatial conditions and perceptive atmospheric qualities.

KEYWORDS Interior Architecture, Experiential Research, Benchmark Standards, and Professional Practice

"What we have been accustomed to thinking is form in architecture may be partly content, and what we have assumed was content may sometimes suffice for form."[1]

Introduced in 2002, the BA Hons degree in Interior Architecture at Oxford Brookes University was part of a concerted effort by the School of Architecture to expand the knowledge and the reputation of its programmes. The decision to focus the course on Interior Architecture instead of Interior Design was taken to widen the spectrum of design skills from what was offered elsewhere in professionally based interior design courses. It implied a more radical alteration of the structure of buildings if required, to provide the ability to re-define the physical and psychological extent of spatial fields. The course offers a substantial autonomy from architecture, as Interior Architecture graduates often operate independently, and are beginning to take leading roles for the definition of clients' briefs when working in a mixed-competence design team.[2]

The course is based on the experience of two distinguished Oxford Brookes academics: the late Tom Porter, who ran an interior-based design unit in Architecture Part 2 for many years, and Professor Byron Mikellides, who consistently advocated the importance of psychology in the field of Architecture since the 1980s. Hence, the Oxford Brookes programme focuses on experiential approach in the built environment, with an emphasis on

spatial articulation for the design of effective places for use.

Currently the Brookes' Interior Architecture course has an annual intake of 30 students, the majority of which practice after graduation in increasingly expanding multi-disciplinary design offices in architecture, addressing the demand for purpose-driven buildings and interiors, exhibitions display, and customised equipment and furniture. The steady growth of the discipline of Interior Architecture has been paralleled in the UK by a widespread demand for a more meaningful engagement of the design of interiors with people, both in public infrastructures and private settings.

After the first post-war generation of professional designers had established the technical framework for the functional requirements of domestic inhabitation and workplace,[3] the provocative and often ephemeral experiments of post-modern designers widened on one hand the scope and the remit of the discipline,[4] but left behind a trail of confusion and disconnection. Today, the eye-catching designs of architects and interior designers have raised questions about the 'real' social consequences of design, which in turn have spurred a broad academic discussion.

Examples of this critical shift abound and include, for example, discussion of the rigidity of modern architecture [such as Juhani Pallasmaa 1996 *The Eyes of the Skin: Architecture and the Senses*], gender issues [Beatriz Colomina 1992 *Sexuality and Space*), social inequalities [Nabeel Hamdi 2004 *Small Change: about the Art of Practice and the Limits of Planning in Cities*], as well as broader comparative discussions that include other art forms [Giordana Bruno 2007 *Atlas of Emotion: Journeys in Art, Architecture and Film*], to name just a few significant studies. Even though most of these publications are based within the field of architecture (and have often been written by architects), they constitute a critical mass of thinking that in conjunction with research in social studies, anthropology and perception, has greatly contributed to the development of a foundation for Interior Architecture studies.

When the Interior Forum Scotland held an international conference in February 2007 in Glasgow entitled *Thinking Inside the Box,*[5] the intellectual terrain was fertile for an enthusiastic participation of over 80 interior academics and professionals. It aided the establishment of a new generation of interior educators in the United Kingdom, modelled on the framework developed by IDEA (Interior Design and Interior Architecture Educators Association from Australia and New Zealand, founded in 1996) of collaboration between innovative theory and sustainable practice. Oxford Brookes Interior Architecture participated with *Thinking through Drawings*, a paper by Ro Spankie that addressed the limitations of "the conventions to which architectural drawings conform to make it possible to see certain things more clearly by suppressing others – however, the very qualities that define the identity of the interior seem to fall into these suppressed categories, by the nature of being unquantifiable, immaterial, and fluid."[6]. These fundamental considerations, there illustrated by experimental drawings by Oxford Brookes students to represent subjective experience within the constraints of orthographic projections, are still one of the main strengths of our programme to expand the range of interior's visualisations.

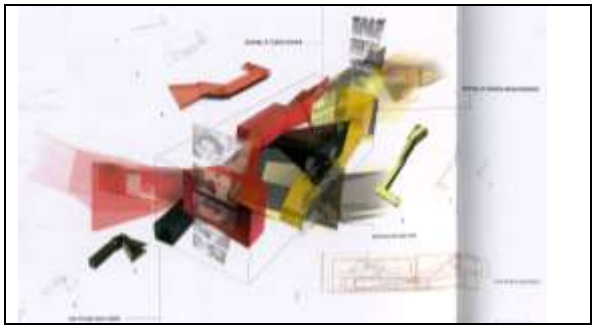

Figure 1. Sarah Kahn (year 3 student Brookes' Interior Architecture 2006) / Three genre/screen cinema; rehabilitation proposal for the former slaughterhouse in Rome. The drawing shows the movie projections in motion in relation to the interior spaces.

From that meeting in Glasgow, IE was born (Interior Educators – the reference for teaching excellence in the field of Interior Design and Interior Architecture in UK [7]), and IE annual meetings became a regular occasion to compare teaching and research among the 40+ members. IE also organises an annual Graduation show at Freerange presenting over 500 interior graduating students in a single venue, and an international conference every

two years, with an academic journal scheduled soon.

The legitimacy of Interior Architecture

One of the recurring themes of the Glasgow conference was the desire to establish legitimacy and validity of the newly emerging academic field, after its 'declaration of independence' from the perceived domination of architecture. Graeme Brooker (then at Manchester Metropolitan University and today Head of the Interior Design Programme at the Royal College od Art and chair of IE Interior Educators) and Sally Stone wrote in the paper entitled *From Organisation to Decoration* that: *"Interior Architecture [...] is a growing intellectual discipline. As the subject has become more accessible and high visible, so it has become more respectable – to the extent that it is now considered as a subject in its own right rather than an adjunct to architecture or an extension of decoration, with more than 100 interior design and interior architecture courses listed on the UCAS website in Britain."*[8] For Brooker and Stone, interiors were frequently the forgotten element within a larger theoretical discussion in architecture, as if space was a leftover produced merely as a consequence of building an exterior. More worryingly, they saw that interior architecture was still a superficial practice that lacked a distinct set of design theories or principles.

Similar concern was expressed by Lois Weinthal. Although technically she was writing about interior design, her arguments are also valid for interior architecture: *"The discipline of interior design has separated itself from architecture, but it still remains secondary. It has yet to pick up the pieces that define a discipline that is not insular, one that places itself in the same scope of criticism that references history, representation, fabrication, theory and interdisciplinary."*[9] She proposed that in the search for a theory of interior, it was important to keep one foot grounded in conventions and tectonics required to construct the interior space, while having the other foot ground in the phenomenal. These two camps (the physical and the phenomenological) for Weinthal stemmed from the work of Christian Norberg-Schultz – who had argued that spaces that reveal more than their physical attributes do contains a character (significant presence), and are thus defined as having atmosphere and essence (genius loci)." [10]

Addressing specifically the issue of interior design competence, Suzie Attiwill, from RMIT Interior Design and chair of IDEA at the time, in a paper entitled *What's in a Canon?* argued that "it became apparent that there is a potential of a canon for interior design – to frame a discourse, to provide a site for debate, to value ideas and address them with seriousness; and to do so by evaluating their implications and encouraging lines of potentials so that they can be shared, debated and evaluated by practitioners, academics and students."[11] The concept of an interior design canon would raise questions and debate as distinct from reference to a set of canonical examples, "as a cumulative cultural repository [the canon] is a means for storing a number of different kinds of architectural knowledge, and it is the vehicle for the propagation of this knowledge, […] by making knowledge available at a public, collective level".[12] Attiwill concluded by proposing that an interior canon should contain at least four elements to respect the variety of the constituent interests:

1. Typologies of interiors – significant architectural interiors that challenged and changed the nature of that practice (critical revision of architectural history).

2. Phenomenal and emotive aspects of interior design (experiential approach).

3. Subjective experience – the manipulating of spatial conditions that have the ability to influence positively people behaviour (psychological conditions).

4. Reconceptualisation of interior in relation to the issues of horizontality and urban/landscape (space as perceived while in motion) – as opposed to the verticality of architectural enclosures (static/intellectual perception of space).

In the BA Interior Architecture course at Oxford Brookes University we have adopted and developed principals similar to those proposed by Attiwill. This line of research has allowed us to investigate effectively the impact of spatial design upon occupation and use, and to investigate a methodology of design based on experience. Most of the design briefs involve Live Project scenarios, to provide realistic contexts and detailed information

about actual use – we have worked with Nurseries, Community Centres, Cohousing Association, Modern Art Oxford gallery, and Street Food Palermo.

The influence of artistic practices for Interior Architecture

When the first Interior Architecture class graduated in 2005, the following quotation was selected to accompany the interior students' drawings in the annual year book. It captured well the sense of spatial purpose of the new academic discipline, which explores the complexity of the built environment:

"There is the outside of the outside form, the inside of the outside form, and then a space in perpetual tensions. Then there is the outside of the inside form and, finally, the inside of the inside form. […] Outside and inside are both coincidental and discontinuous. Fit and misfit." Eric Owen Moss, Gnostic Architecture[13]

Fittingly, Moss was not describing the space inside a building, like that of the deconstructed architecture which he was building in Culver City in Los Angeles, but referred instead to a small sculpture by Henry Moore, *Helmet Head* (1960). Henry Moore's sculptures are particularly important for understanding Interior Architecture, because they show simultaneously negative and positive forms (interlocking forms), challenging the limitations of simple figuration and objective representation by applying a multi-focal approach to spatial occupation. As pointed out by Sigfried Giedion in *Space, Time and Architecture*: *"Space in modern physics is conceived of as relative to a moving point of reference, not as the absolute static entity of the baroque system of Newton. And in modern art, for the first time since the Renaissance, a new conception of space leads to a self-conscious enlargement of our perceptions. Cubism views objects relatively, from several points of view […], introducing the principle of simultaneity."*[14]

Contemporary with Moore's search for sculptural 'essence', the Italian critic Bruno Zevi (in *Architecture as Space*) was redefining the essence of architecture by taking into account for the experience of space the point of view of a moving observer: *"Architecture does not consist in the sum of the width, length and height of the structural elements which enclose space, but in the void itself, the enclosed space in which man lives and moves. […] Even though a drawn plan may have abstract beauty on paper, or the four facades may seem well-balanced and the total volume well-proportioned, the building itself might turn out to be poor architecture."*[15] For Zevi internal space, space that cannot be represented, and which can be grasped and felt only through direct observation, was the main protagonist of architecture. Having established the role of the mind in the perception of space, we have looked at artistic practices to provide a source of inspiration for representing the relation between reality, perception, and meaningful manipulation.

Many modern British artists (from Henry Moore in sculpture, Francis Bacon in painting, Rachel Whiteread in casts, and David Hockney in photocollages) have used a deliberate inclusion of residual elements of reality, however distorted or fragmentary, to acknowledge the emotive dimension of perception. Considering their work in the context of Interior Architecture provided a method for approaching spatial design, and a mode of representation of experience that resolved some of the limitations of traditional architectural drawings. Hockney's experiments, for example, with photo collages of multiple images taken in the same interior portray the visual perception/reception of images in the mind more accurately that single point perspective: "Photography is alright if you don't mind looking at the world from the point of view of a paralyzed Cyclops *for a split second*. But that's not what it's like to live in the world, or to convey the experience of living in the world. […] The joiners [Hockney's own term for his multiple Polaroid photo-collages] are much closer to the way that we actually look at things, closer to the truth of experience".[16]

Figure 2. David Hockney – 'Christopher Isherwood talking to Bob Holman' (1983)

Notwithstanding obvious differences between a work of art and a building, any building as perceived appears as a series of disjointed configurations (even if our mind is able to reconnect them), and form as a preconceived attribute does not account for the totality of its effects in architecture. Spatial sequence and articulation in Interior Architecture is therefore more important than shape to design a building according to its functional purpose, people involvement, and experiential sensations – the main conditions that have become the necessary elements to fulfil the potential of any given building's program.

When spatial sequencing is designed effectively, a visual 'inversion' occurs between solids and voids: the articulation of the openings and connective spaces becomes more important than the solid walls. Eric Owen Moss proposes that this inversion extends to incorporate all the elements and actions contained within a space. He suggested that a sort of spatial experiential glue connects solids and voids, *"a cerebral underground that designates a crisscross of emotions and ideas, piled over many years. The interconnections are so fine, so precarious, and so can't-be-numberedish, that it is not possible to break in. Start to disable the glue and it's gone: it's psychologically inviolable"*.[17]

Any meaningful discussion on Interior Architecture should acknowledges the gluey bundle made of meanings, habits, and design elements, from which it is difficult to dissect any specific part without forcibly excluding other interconnected components. The process of inhabitation of dwellings/workplaces over time produce a progressive occupation of available space, creating unique crystallisations in perpetual tension of possessions, adjustments, rituals and memories – a sort of significant membrane set between the internal articulation of the spaces and the skeleton of the building.

It follows that the main objective of Interior Architecture is to encourage students and practitioners to understand this complex web of references, and then to encourage them to design meaningful and inspirational space at all scales (from buildings to small details) for the wellbeing and participation of the end-users. Studio design briefs include the transformation of existing buildings for better uses, or smaller scale semi-temporary pavilions and re-fittings, experimenting with unconventional spatial configurations and innovative materials. The body of work produced has helped to consolidate the scope of Interior Architecture as a discipline and to establish its relevance within the wider professional world. Interior Architecture today operates alongside and overlaps with the more established fields of Architecture, Interior Design and Product Design, and the visual arts in general. But it in fact distinguishes itself in its unique blend of professional competences over dimensions and human scale, ergonomic requirements, manufacture processes, psychological processes, and visual imagery. In doing this, Interior Architecture has effectively shifted the focus from the 'object' of the architecture – *building* –, to the 'subject' – *occupant* –, and thus placed the emphasis on people's movement, visual interferences, and modes of occupation that influence the experience of the built environments, making students and practitioners more aware of their social responsibility.

Architecture without buildings

One of the consequences of the above considerations, specifically the importance of patterns of use in Interior Architecture, is that architecture can still operate without a rigid compliance to the content of buildings. This was implied in a thought-provoking article *Architecture Without Buildings* by Nathan Silver for a collection of contributions by critics and architects edited by Charles Jencks and George Baird.[18] The editors had explicitly encouraged radical propositions with the aim to demonstrate a lack of social consensus about buildings' meanings in the aftermath of 1968, a crisis point for the purists of the modern movement. At the time Nathan Silver had just published his book *Lost New York*,[19] in which he had advocated the importance of people's emotional connection to meaningful architecture.

Elaborating on this argument, Silver suggested that: "architecture is fundamentally a people-system, not a thing-system; and that (incidentally) architecture without architects is impossible, […] but architecture without building may be quite possible, since use-situations can exist without buildings for them."[20] For Silver buildings are the usual formal agents which transmit architectural values but they are not necessarily the form of

architecture: *"that is, maybe the form is predominately, or partly, invisible. A band shell, a viewing platform, a scenic highway, a car aren't simply forms but formal agents; they provide for larger, integral forms in our 'ethnic domain': a concert, a parade, a spectacle, a journey. Things are mere surrogates".*[21]

In Interior Architecture continuity of perception is more relevant than the formal distinction between inside and outside, and between architecture and furniture. The ramifications of this 'experiential' approach to design, where forms are not intended as visual entities (buildings), but as patterns of use (forms of occupation), suggests not the actual disappearance of buildings, as the title of Silver's essay would imply, but challenges the apparent obsession of architects with them. Silver was aware that his examples were not necessarily 'buildings' according to the common use of the word, because they had little to do with codified architecture. Yet he wondered why the same arguments could not be extended to the invisible agency of organisation and its relationship within a church, a railroad station, and a meeting hall.

Instead of a design process that starts with raw materials and ends with a form that enables functions, Silver argued that patterns of use already exist prior to any design process, and should constitute the main focus of the design development; the building should became an instrument to enhance the future inhabitation process.
This point has now been installed at the core of the field of Interior Architecture.

Phenomenology
In *Eye and Mind* Maurice Merleau-Ponty proposed that bodies extend and affect consciousness and so established perceptions as a formative element of the consciousness that defines the integrity of the world to individuals. Applied to design, phenomenological analysis suggests that any rational objective understanding of buildings is an 'illusion' (even if we possess a complete knowledge of the design blueprint), and that subjective experience is the key through which people truly experience lived space. The modernist architects' conviction that architectural space could exist 'per se', as if it was a separated entity indeterminable by direct perception (an object equal to all), was effectively challenged by Merleau-Ponty who eloquently wrote: "I do not see [space] according to its exterior envelope; I live in it from the inside; I am immersed in it. After all, the world is all around me, not in front of me".[22]

These are concepts that architects and designers need to consider. Design should not attempt a superficial rationalisation of space, but rather make space accessible to people in the implementation of their activities. Interiors should be formed by extending spatial qualities around people's actions (and not vice-versa), reconciling the disconnection between people and their environments. Operating from the opposite end of conventional interior design practices, Interior Architecture aims to define detailed programmes of use before buildings are formed, and strategies of implementation so as to enable the desired patterns of use to be achieved. This means the acceptance that a building can be physically present to establish the framework of space, and yet disappear at the same time, fading into the background.

Silver neatly explained this with a challenge of traditional architectural tenets:
"Man is the measure, literally [not the idealized geometrical Vitruvian man, but a perceptive subjective emotive man]. The design material isn't brick or concrete (or tracing paper), but human adaptability. The 'subject matter' of architecture is the life situation […] where the environment issues formal instructions only in terms of use-situations or potential use-situations. The best architecture according to this new proposition would be that which defines, with a chance of high sensibility, normality without uniformity (because the human normal state is not uniform), and formality without deformity (meaning inappropriate exaggeration)." [23]

Bruno Zevi declared his enthusiastic approval of Silver's essay in the critical notes published in his 'The Modern Language of Architecture':
"The slogan 'architecture without buildings' should be adopted in the practice of architecture, and even more in the schools of architecture. It does not matter that this 'reduction ad absurdum' is not telling all the truth about architecture. It stimulates the proposition of innovative patterns for human actions without an a priori judgment about their formal enveloping. […] If we are able to understand the multiplicity of the patterns of

occupation, and how these can be accommodated in architectural space, the building will follow naturally, and it will be more efficient and expressive when it has not been designed prematurely to appear sophisticated." [24]

Variable Spatial Conditions

One of the difficulties in adopting a spatial/social approach to architecture is that space is not a passive result of the void's cavity inside a building, but actually a human faculty: *"As well as being a physical property of dimension or extent, space is also a property of the mind, part of the apparatus through which we perceive the world. It is thus simultaneously a thing within the world, that architects can manipulate, and a mental construct through which the mind knows the world, and thus outside the realm of architectural practice (although it may affect the way in which the results of architecture are perceived)."*[25] Although Forty recognised that architects, by virtue of traditional involvement with space, often claim authority in its practice, they are as responsible as any for the schism of mental and physical space, a schism which they have reinforced and perpetuated.

To account for the simultaneous presence of objective and subjective elements, Interior Architecture has established that a meaningful design for individuals should remain flexible and variable, instead of stable and objective. For this purpose we have developed at Brookes the following diagram of variable spatial qualities:

Figure 3. Spatial Attributes Matrix / Brookes' Interior Architecture studio

'Value' as the exchange currency between different competences

In order to navigate in this complex phenomenological and philosophical reality, Interior Architecture at Brookes has recently introduced the notion of value as an 'exchange currency' between objective and subjective realms; value in a design process is formed by the reciprocal influence of people participating in the brief, and it is made available across the different fields of competence in the design resolution.

In terms of the built environment 'value' is a relative attribute, unstable and constantly reasserting, and can be susceptible to deliberate actions (design), but can be also impervious to external stimulation as it is ultimately a personal judgement. Value is at once objective, subjective, and perceived (real and apparent). And value can be quantifiable using quantitative and qualitative scales of judgement.

Typically, there is the client's definition of value in terms of requirements, which can be either realistic, or misdirected. Design strategies effectively attempt both functional and aesthetic creations of value, and design processes and manufacturing of design elements and furniture requires a considered manipulation of economic, ergonomic, and experiential parameters aimed at maximising value. People's experience is a subjective measure of value, as the use of buildings and spaces by individuals is ultimately based on what is perceived as added value.

In this sense a building programme can be defined as a deliberate augmentative summation of value across competences, or, an anticipation of possible valuable outcomes. Importantly, the point is not to quantify value rigidly, but to utilise value(s) (either explicit, implicit, or even alleged) for an assessment of design propositions and their effect on people. In order to understand this concept, we have launched in 2017 a multi-disciplinary research project on 'Designing the Experience, the Experience of Design'[26] to include an analysis of the Maggie's Cancer Centres.

The Maggie's Centres offer a remarkable consistency both in terms of architectural excellence and spatial qualities, and are a successful social infrastructure in support of cancer treatment. While all Maggie's Centres share an identical programme – the 'architectural brief' inspired by Maggie Keswick Jencks [27]–, the 23 built centres appear rather dissimilar. Yet, notwithstanding structural and appearances diversity, their 'effect' on people (the experience of the users and staff) is consistently uniform, and revolves

around familiar spatial configurations and specific conditions of use, such as the central 'kitchen table'. Each Maggie's Centre sits in the landscape as a series of interrelated spaces without rigidly defined enclosures, and possesses a tight correspondence between external forms and internal spatial fields, even though the buildings themselves may appear disjointed, transparent, or rather abstract. These characteristics demonstrate the Interior Architecture assumption that a spatial programme of occupation (where experiential qualities are defined before the shape of the building is finalised) can be flexible in application.

In the various Maggie's centres the architects were not expected to re-formulate the programme but encouraged to interpret it, ensuring that the buildings were able to operate in often hostile contexts (because of their location inside overly functional hospital sites). The architects had to adapt and modify repeatedly their design in constant conversation with Maggie's experts to ensure that the buildings delivered in those difficult conditions. Once opened, it is in their daily use, by people from all walks of life, that the Maggie's centres are most successful because they work effectively as transitory safe places, visually open and continuously connected with their surroundings, and yet able to retain privacy and dignity.

Interior Architecture specific competences
Conscious that perceptions respond to relational position, and that they are not defined in absolute/isolate terms, Interior Architecture uses a specific terminology (and representation techniques) to define the main areas of spatial exchange:

1. Spatial Fields
Both objective (voids) and subjective (identity), spatial fields are defined by thresholds and condition of occupation, and determine the relation of people with their immediate surroundings. In objective terms, a 'spatial field' is the sum of all voids and spaces within a building. However the edges of thresholds are not easy to define, as the extents of spatial fields are often questionable. But they can still be represented onto 'orthographic' technical drawings – what in Interior Architecture we call 'trajectory' plans/sections (through time, no space) – even if a spatial field in reality appears 'distorted' by subjective movement and experience.

Figure 4.

Influence and inspiration for an understanding of spatial fields came from landscape design, and in particular the Japanese Promenade Garden (Kaiyu-shiki-teien 'stroll gardens'). There, following a path means that a visitor is presented with a series of scenes, enhanced with the techniques of 'borrowed scenery', where outside elements are incorporated to create the illusion that the garden is larger, and 'hide-and-reveal' to concentrate the views to the most evocative elements.[28]

Urban Studies (perceptual approach) are also relevant - Kevin Lynch for example in *The Image of the City* [29] noted that people in an urban context understand their environment with a degree of predictable consistency, forming mental maps. In Lynch's theory the city is treated as a composition, consisting of 'rules' and elements whose arrangement can produce stronger or weaker effects on the observer. Ultimately, the quality of a spatial field rests on the power of 'contrasts' – which asserts the ability of non-homogeneous elements to form a meaningful sequence.

2. Furnitecture
(Furni(ture)+(Archi)tecture) is the intermediary scale of inhabitation between architecture and furniture, to include individual activities and subject to variable conditions. It defines the relation between bodies and objects in space. Furnitecture performs as a spatial membrane that softens and articulates the transition between the skeletal architecture and the versatile living that happens within it. When carefully orchestrated, furnitecture can articulate and (re)define available space to facilitate positive responses, inserting a complex psychological dimension into architecture by animating structures that normally perform only secondary roles.

Important considerations for the definition of furnitecture came from the critical catalogue of "Living in Motion: design and architecture for flexible dwelling" exhibition held at Vitra Design Museum in 2002,[30] where a series of

disparate innovations from different cultural and geographical contexts applied to a range of inhabitable spaces, testifying to the human capacity to shape and modify furniture and spaces to create inhabitable living conditions (hammocks, nomadic tents, caravans etc..). They all offered shelter and a degree of intimacy, without necessarily being 'buildings', or designed in the traditional sense as independent objects.

Furnitectures are notoriously difficult to design and communicate, as they extend by definition across different spaces and functions in the same environment. We use section models similarly to anatomic drawings to represent these internal 'organs'.

Figure5.

3. Atmosphere

With this term we define the relation between the body and its own internal psychological functioning. Immaterial qualities determine the experience by the application of design within variable natural conditions, and people's interaction.

Peter Zumthor explained: *"Architecture possesses quality when it affects people emotionally. We perceive atmosphere through our emotional sensibility – a form of perception that works incredibly quickly. […] We are capable of immediate appreciation, which is very different from linear thought."*[31]

Juhani Pallasmaa has produced important considerations to define the nature of atmospheres: *"The character of a space or place is not merely a visual quality, as it usually assumed. The judgement of environmental character is a complex fusion of countless factors that are synthetically grasped as an overall atmosphere, feeling, mood, or ambience."*[32] For Pallasmaa this experience is multisensory and involves judgements beyond the five Aristotelian senses, such as the senses of orientation, balance, motion, continuity, and scale. This complex assessment involves perception, memory, and imagination. In addition there are interpersonal atmospheres – cultural, social, family, workplace etc. Olafur Eliasson noted that atmosphere is by definition unstable, and that we should not aim to force it in a space, but rather evoke it using a sophisticated design strategy. *"Like the weather, atmospheres change all the time and that's what makes the concept so important. An atmosphere cannot be an autonomous state; it cannot be in standstill, frozen. […] In a public place, is the coming together of numerous trajectories, the coming together of materials, of intentions, the building; it is hovering, a resonance."*[33]

One of the techniques of representation developed in Interior Architecture to illustrate the instability of design atmospheres involves the 'semi-rendering' of internal views, living a strata of wireframe visible at the edge of computer renderings, similar to the visual background trace of short memory experience of space.

Figure 6.

Conclusions

Because of its ability to design meaningful spatial sequences, Interior Architecture can provide an important contribution to shape social interaction, as explained by Peter Blundell Jones: *"Accepting that buildings have some kind of shaping influence on life is not to say that architecture determines behavior, or that 'form follows function' […]. Most buildings apart from prisons are not physically coercive, nor do they force people to behave in a particular way, yet all buildings limit the available possibilities and can by their organisation suggest or persuade towards particular courses of action. The relationship between space and activity is evidently neither a compelling certainty nor open or random, but complex and variable."*[34] For Blundell Jones, what makes it so hard to pin down is that it is a two-way process involving a 'reading' as well as a 'doing', determined by the mutual relation between users and building. In other words, the arrangement of the building has somehow to mesh with a set of habits, beliefs, and expectations held by the person who experienced and use it, a matter of what Pierre Bourdieu have called the 'habitus'. [35]

According to Blundell Jones' suggestions, buildings provide prompts for action and

frameworks to define relationships with fellow human beings in forming societies and communities, whilst variations in buildings and social practices expose differences in understanding and in conceptions of the world.

This is what Leon Van Schaik called the concept of 'spatial intelligence' as something which each person carries with them and is produced by their history in space: *"What we in the spatial profession hold in custody for everyone is the ability to put them back in touch with their own spatial intelligence"*.[36]

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